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## Original Communications.

### SUMMARY OF RESULTS OF EXPERIMENTS ON THE PERCEPTION OF HIGH MUSICAL TONES.

By CLARENCE J. BLAKE, M.D., Boston.

Read before the Am. Otological Society, July 17th, 1872.

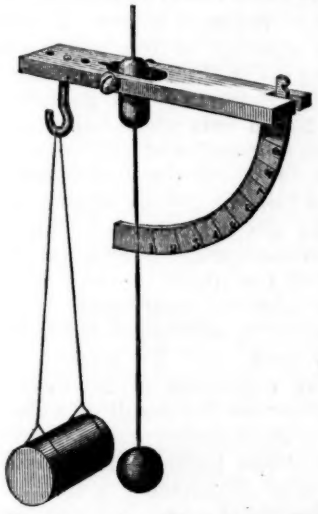
THE highest limit of the perceptive power of the human ear is very variously estimated by various authors. Vierordt, for instance, gives the value of the highest tone as 48,000 (single) vibrations in the second. Helmholtz puts it at 76,000 single vibrations in the second, and Despretz at 73,700 single vibrations in the second. This discrepancy in the results obtained by different observers leads us naturally to the question as to the cause thereof; and since the test employed is always the same, a fixed number of vibrations in a second always giving the same tone, we must turn to the possibility of variation in the organ tested for an explanation of the difference. That there should be various degrees of extent of the perceptive power of the human ear in different individuals is to be expected; but this is not in itself sufficient to account for the difference in the degree of perception of high tones, particularly in different individuals, or even in the same individual under varying conditions.

That the difference is largely due to variations in the sound conducting and not in the perceptive portion of the auditory apparatus, may be readily demonstrated by experiment, and the discrepancy of statement as to the degree of perception possibly accounted for. In conducting such experiments, it is necessary first to have instruments with which high tones of a determined quality may be repeated at will with the same degree of intensity; and, second, to be able to determine accurately the condition of the organ tested. For the accomplishment of the latter object, we have the instruments at the command of every aural surgeon.

For the production of high musical tones, the steel rods as made by König, of Paris, are the best for the purpose of accurate tests. The musical value of a steel rod of certain temper and length, and of a fixed diameter, say 2 c. m., having been ascertained, the proper length of rods of the same temper and diameter to give higher tones may be determined by the rule that the number of vibrations is inversely proportional to the square of the length of the rod.

The dimensions of such a series of rods, 2 c. m. in diameter, of Hobson's choice steel, white temper, would be as follows:—

| Length. | Point of Suspension. | Value. |
|---|---|---|
| 70·5 m. m. | 16·4 m. m. | 35,000 v. s. |
| 66·2 " | 15·4 " | 40,000 " |
| 62·4 " | 14·5 " | 45,000 " |
| 59·1 " | 13·7 " | 50,000 " |
| 56·2 " | 13·1 " | 55,000 " |
| 53·8 " | 12·5 " | 60,000 " |
| 51·8 " | 12·05 " | 65,000 " |
| 50·1 " | 11·6 " | 70,000 " |
| 48·7 " | 11·3 " | 75,000 " |
| 47·5 " | 11·04 " | 80,000 " |



In order to get a clear tone, it is necessary to suspend the rods by means of loops of silk, or of fine wire; a loss of clearness

in tone is the result of variation from a given point of suspension, which may be obtained by dividing the length of the rod by 4.3, the result giving the distance from the end of the rod, for the attachment of the silk or wire; for example, the length $70.5 \div 4.3 = 16.4$, &c. To obtain a determined intensity of tone is the next requisite, and for this purpose I have employed a small steel pendulum, swinging through an arc of 90°, and suspended from a framework, from which the rods may also be suspended. By means of the pendulum swinging a given distance and striking the rod, a definite degree of intensity is obtained, which may be controlled at pleasure. With this instrument and the steel rods, the first series of experiments was to ascertain the average perceptive power in the normal ear; and this was found to vary considerably with the age; thus, at about the ages of twelve and thirteen years, a tone of 40.960 v. s. was heard at a distance of 34 feet; at the ages of from eighteen to twenty years the same tone was heard only at distances of from 13 to 16 feet, and at the extreme limit of 34 feet, the tone of 36,864 v. s. only; at the ages of from twenty-eight to thirty years, at the extreme limit of 34 feet, only tones up to 32,768 v. s. were perceptible; while above the age of fifty years the limit of perception at the same distance had still further diminished, and in a greater variety of degree.

In the majority of the cases of persons over fifty years of age, and possessing, apparently, normal hearing, who were subjected to these tests, an examination of the membrana tympani showed a varying degree of opacity of the membrane corresponding to a thickening of the mucous coat. To determine the possible connection between this appearance and the diminished perception of high tones, younger persons, in whom the membrana tympani presented an analogous appearance, were tested in the same manner, the result being a corresponding diminution of the perception of the higher tones; with this exception, however, that where the membrana tympani, in addition to thickening of its mucous coat, had its tension increased either by retraction of the musc. tensor tympani, or as the result of exhaustion of the air in the middle ear, the degree of perception of the higher tones was increased rather than diminished, a fact in accordance with the known law concerning the transmission of higher musical tones by tense membranes. In the majority of cases of simple catarrhal affections of the middle ear, in which the membrana tympani was more or less opaque, and the hearing distance for the watch and voice increased on the use of the air douche, the perception of the higher musical tones above 30,000 v. s. was diminished.

In two cases of voluntary contraction of the musc. tensor tympani the perception increased from 3,000 v. s. to 5,000 v. s. during the contraction of the muscle, above the limit of perception observed when the muscle was not contracted.

A second series of experiments to determine the influence of the membrana tympani upon the perception of high tones, and particularly the result of its elimination, was made in cases of perforation of the membrane in consequence of disease; those cases being selected in which the mucous membrane had returned to its normal condition, as it was found, after a few tests, that the thickening of the mucous membrane or the presence of even a slight quantity of secretion in the middle ear, sensibly diminished the perception of the higher tones. The results obtained were of exceeding interest; for while as a rule the perception of higher tones was increased, this varied greatly with the size and location of the perforation, and the corresponding degree of retraction of the musc. tensor tympani. The perception of high tones increased, as a rule, with the approximation of the perforation to the posterior superior periphery of the membrana tympani, and in one case where a small band of cicatricial tissue extended from the posterior border of the perforation to the long process of the incus, a tone of 65,536 v. s. was distinctly heard.

Aside from the location of the perforations, an increase in size did not seem to be accompanied by an increase in perception of high tones. In all of the above cases, however, there had been, as the result of disease, more or less of change in the structures within the middle ear; and, aside from the existence of a perforation of the membrana tympani, more or less of variation from the normal condition.

It became necessary, therefore, in order to obtain a series of controlling experiments by which to judge of the value of those already made, to watch for cases of imperforate membrana tympani in which the perception of the higher tones was normal, or nearly so, and in which it was justifiable to perforate the membrane. Of the cases in which the operation was performed, one especially illustrates in a remarkable degree the result obtained in the majority;

namely, an increase in the perception of high tones almost immediately after the operation. In the cases of simple myringotomy, preference was given to the posterior segment of the membrana tympani in making the incision. The case referred to was that of a woman, 30 years of age, in whom the hearing in both ears had been gradually and steadily diminishing for at least eight years. At the time of operation, a watch (72 in. normal hearing distance) was heard only on contact in the right ear, and not at all in the left ear; the perception for both watch and tuning-fork through the bones of the head was good. The meatus on both sides was normal, and the membrana tympani of the left ear slightly opaque, concave but in a slight degree, the short process of the malleus not very prominent, and the posterior fold somewhat elongated. Commencing in the posterior segment of the membrane, on a line with the lower end of the process of the malleus, and extending downwards and forwards, was a chain of small calcareous deposits. The test with the steel rods frequently repeated gave a tone of 35,000 v. s. as the limit of perception of high tones in that ear. In this case, the introduction of Politzer's eyelet was decided upon, and with a lance-headed myringotome, two incisions were made in the posterior inferior segment of the membrana tympani, forming a triangular flap with its base directed downwards. The flap was then turned inwards, and a hard, rubber eyelet introduced in such a manner that the flap springing upwards should press the eyelet against the edges of the opening and hold it in position, thus obviating the necessity of dilatation by means of the laminaria tent, and disturbing the membrana tympani as little as possible. Immediately after the operation, the hearing for the watch increased to contact, and for the voice to twenty feet distance; while a steel rod, having a tone of 80,000 v. s., was distinctly heard at a distance of three inches from the ear.

This high degree of perception continued unabated, and accompanied by a steady increase of hearing for the voice up to within three weeks of the date of the present meeting of the Otological Society (July 17th). From that time, the hearing for the voice and the perception of high tones diminished until July 14th, when the eyelet came away leaving a small cicatrix. On examination of the eyelet, it was found that a new growth, springing from the edges of the flap, had extended over the inner end of the eyelet, completely occluding the opening, sufficient, when considered in the light of previous observations, to account for the diminished perception of the tones of the steel rods.*

Both as regards the statements of the various authorities as to the extreme limit of the perceptive power of the human ear, and in connection with the observations of Wolf, and the later experiments of Mach and Kessel, the above experiments are of interest, and capable of a much greater degree of elaboration; while they demonstrate, to a certain extent, the diagnostic value of instruments for the purpose of testing the perception of the higher musical tones.

It is due to Prof. C. E. Pickering to express my sense of indebtedness for his council as to the mode of conducting the experiments referred to in this paper.

## GUN-SHOT WOUND OF THE NECK.

By H. W. Sawtelle, M.D.

Private G. P. C., Co. G, 1st U. S. Sharpshooters, aged 21 years, was wounded, while in the act of firing his rifle, at the battle of Chancellorsville, Va., May 2d, 1863, by a conoidal ball entering about half an inch above the left clavicle and about one inch from its sternal extremity, and passing transversely between the trachea and œsophagus, lodged beneath the right clavicle near the point where the subclavian emerges. He was conveyed to Washington, D. C., admitted into St. Aloysius Hospital, May 7th, 1863. There was but little blood lost. A numb pain ensued, which lasted six months, referred particularly to the elbow-joint and fingers, the fingers remaining semi-flexed for three months. He was unable to speak aloud for two weeks, and nourishment could only be taken in the liquid form, through a tube, for several weeks. The forearm was carried at right angles, and narcotics were exhibited to relieve pain. By the middle of July following, the wound had perfectly healed, and never re-opened. At this date the joint, which had become firmly fixed at right angles from inaction, was straightened while the patient was under the influence of chloroform, and frequent flexion and extension subsequently fully restored the use of the joint. He was returned to duty in the 2d Battalion Veteran Reserve

* One week after the meeting of the Society, the eyelet was re-introduced with like results as to the perception of high tones, and has remained in position with a continuance of the same up to the present date, Oct. 1st.

Corps, Oct. 31st, 1863, whence he was discharged the service September 14th, 1864, and pensioned.

The hand and fingers continued to be very sensitive to cold and heat, and at times intensely painful.

One morning in the fall of 1865, he found the power of supporting the head was lost to such an extent that he was unable to rise from his bed, and clonic contractions, drawing the head to the right shoulder, lasted four days, but did not recur. Late in December, 1869, the pain at the point of lodgement of the missile began to increase, and, January 31st, 1870, Professor N. S. Lincoln, having placed the patient under the influence of chloroform, cut down and removed the ball, which was found thrust in between the subclavian and a branch of the brachial plexus, the ball resting on the artery just where it emerges from beneath the clavicle, with the nerve drawn tightly across the missile in front. On pushing aside this nerve, vigorous shaking of the limb was produced. The wound healed readily; the limb, which had become somewhat atrophied, is now equal to its fellow in size and strength, and with the exception of a very slight sensitiveness of the fingers to cold and heat, which is gradually improving, the patient is entirely relieved of his suffering.

*Washington, D. C., July 6th,* 1872.

## CASE OF VESICO-VAGINAL FISTULA, INVOLVING THE URETHRA, WITH SUCCESSFUL OPERATION.

By H. B. Stoddard, M.D., Northampton.

Read at a Meeting of the Hampshire County Medical Society, Oct. 9th, 1872.

The patient, Mrs. P. K., æt. 35, then living in Ireland, was delivered of her sixth child in November, 1866, after a protracted labor of forty-eight hours' duration, during which she was attended by a midwife.

She states that, immediately afterwards, the urine failed to pass by the urethra, but came away with the lochia. She called a physician, who recognized her condition, and sent her to a hospital, three weeks after her confinement. There she submitted to an operation, silk sutures being used. The operation proved unsuccessful, and was not repeated.

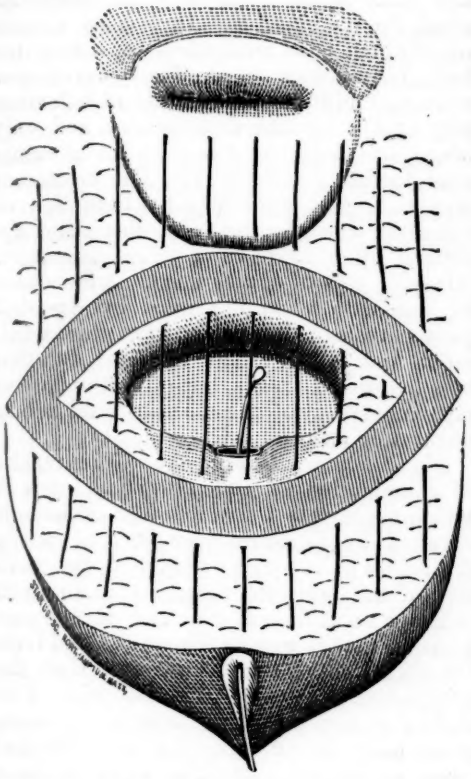
The patient's general health has been unimpaired, and she has given birth to two children during the six years which have elapsed since the establishment of the fistula, both confinements being unattended by any difficulty.

The constant dribbling of urine and saturation of underclothing, together with the consequent irritation of the labia and thighs, has been a source of annoyance and mortification to her, and led her at last to consult me for relief. Upon examination, I found a fistulous opening at the base of the bladder, situated at the junction of the bladder and urethra, and involving the latter, extending an inch or more in an exactly transverse direction, three quarters of an inch in width, and thus oval in form. Of its borders, the posterior was smooth, regular and rounded, and formed of the thickened vesico-vaginal septum; the anterior was quite irregular, and was made up, in its middle third, by the thin and flattened inner extremity of the urethra; in each of its outer thirds by a thin and somewhat irregular line of vesico-vaginal tissue, lying upon a lower plane than that of the posterior border, and of the adjacent urethra. The fibres of the sphincter vesicæ seemed to have been destroyed in great measure. The vesico-vaginal wall was much thickened and indurated, and the anterior lip of the cervix uteri was prolonged down upon and blended with it to within an inch of the posterior border of the fistula. A probe was readily passed through the urethra, showing its permeability.

Here, then, it was evident, was a condition of the parts for the relief of which the usual operation of denuding and approximating the edges of the fistula was inappropriate and would have proved inadequate; for, even had I been successful in the attempt to unite the thin and irregular anterior edge, made up, in part, of the still thinner inferior wall of the urethra, to the thicker posterior edge, not only would the line of union have been a weak one, but the requisite traction upon the inferior wall of the urethra would have rendered it a funnel-shaped canal, through which the urine would have found ready and constant exit.

Influenced by this consideration, and guided by the valuable suggestions of Dr. Emmet, of New York, whom I consulted in reference to the case, I decided not to denude the *edges* of the fistula, but to remove a continuous strip of the vaginal mucous membrane, one third of an inch wide, *around*, and a quarter of an inch *back from* the edges of the fistula. Such a line of denudation would cross over the urethra transversely, and about a quarter of an inch in front of its inner extremity. When the

opposite surfaces of vaginal tissue thus denuded should be approximated and united, and the open mouth of the urethra *turned into the bladder*, two important results were hoped for: *first*, a broad and firm line of union of the opposed surfaces; *second*, both from the necessary traction upon the inferior wall of the urethra and its consequent approximation to the superior wall, and, also, from the probable bending upon itself of the free inner extremity of the urethra, the establishment of a sort of valve which should in some measure fulfil the office of the missing sphincter; and such a valve would be likely to be increased in efficiency as the bladder filled and the urethra pressed more firmly against the posterior surface of the symphysis pubis. The accompanying wood-cut well illustrates the peculiarities of the case and mode of operation.



After brief preliminary treatment, the operation was performed on the 27th of April, 1872, Drs. Dunlap, Thompson and Tyler, of this town, present and assisting.

The patient was etherized and placed in Sims's position and Sims's speculum introduced. With the curved scissors, a nearly continuous strip of the vaginal mucous membrane, one-third of an inch wide, was then removed, entirely around the fistula and well out to an angle beyond each extremity.

The line of denudation, when completed, measured about two inches in length on each side of the fistula. Ten silver wire sutures were then passed under the denuded borders of the fistula, and the parts carefully approximated by twisting the ends of the sutures. Considerable difficulty was experienced in passing the sutures accurately through the delicate tissue overlying and adjoining the urethra; two or three of the sutures were passed through the hypertrophied anterior lip of the cervix before alluded to.

On the completion of the operation, apposition was found complete, and no oozing of urine could be detected in the line of the fistula.

The after-treatment consisted of confinement to bed, and to the recumbent position; two or three grains of opium daily, to keep the bowels confined and to insure sleep at night; the retention of Sims's sigmoid catheter—removed and cleansed twice a day; and, after the second day, fluid and nourishing diet, such as beef-tea, chicken broth and the like. The vagina was also washed out by a tepid water injection each day. The progress of the case was quite satisfactory; hardly any febrile reaction occurred; no vesical spasm interfered with the retention of the catheter; and the urine was wholly discharged through the instrument. On the eleventh day after the operation, the sutures were removed and union found to be complete; no leakage could be discovered at any point of the line of union. The catheter was retained three or four days longer to insure more perfect union, and during this time the bowels were relieved by enemata and castor oil.

On the fifteenth day, the catheter was removed, and the retentive and expulsive power of the bladder put to the test. To my gratification, the urine was retained for three hours, and then passed completely and without difficulty.

Since then, improvement in vesical power has been constant; at the present date, the urine is passed only three or four times daily, and the patient is not obliged to rise at night for that purpose, as she was obliged to do the first two or three weeks.

The case seems to me one of special interest, from the peculiarity of the local condition, and the mode of treating it, and from the ready resumption of its functions by an organ so long disused.

# Progress in Medicine.

## REPORT ON OPHTHALMOLOGY.

By O. F. Wadsworth, M.D.

(Concluded from page 326.)

### Sclera.

A case of fibroma of the sclera is detailed in the last number of the *Archives of Ophthalmology and Otology* by Saemisch, which is especially interesting as the only tumor of the kind hitherto reported. It occurred in a child of ten years, was attached to the posterior wall of the sclera, extending inward from the optic nerve 10 mm., was 8 mm. wide and 5 mm. thick, and "consisted of a fibrous connective tissue, which in torn preparations appeared extremely wavy and interspersed with here more, there fewer, cellular elements, which exhibited the development of fibre from round cells in all phases." There was no special demarkation between it and the sclera. Inside the eye was a circumscribed fibroid degeneration of the choroid and retina outward from the papilla, and these coats here formed a solid mass of two mm. in thickness. The radial fibres of the retina were very generally hypertrophied; the choroid, except in the limited space mentioned, comparatively little changed. The retina was separated and the sub-retinal space filled with a purulent pulpy mass. This condition had given rise to the diagnosis of glioma before the eye was removed.

### Iris and Choroid.

*Cysts of the Iris.*—Rothmund (*Monatsbl. f. Augenh.*, June) has collected 37 cases of cysts of the iris, and draws the following conclusions from the study and comparison of them. Three varieties must be distinguished—serous, gelatinous and epidermoid, the serous form being far the most common. A very large majority appear after wounds. The epidermoid cysts are certainly of traumatic origin, and are due to an implantation of cells from the hair-follicles or at least the cutis. The other varieties *may* arise from an implantation of epithelium from the anterior surface of the cornea, or the injury may cause the formation of a closed pouch from a portion of the iris, in which case the serum in the cyst is only humor aqueous. The best treatment is extirpation, and the cornea should be incised so as to avoid opening the cyst if possible. This treatment should be adopted so soon as the diagnosis is established. In nearly every case of excision alone, or partial excision, relapse occurs.

*Syphilitic Iritis.*—Schmidt (*Berl. Klin. Wochensch.*, 23, 24) writes an interesting paper on syphilitic iritis, basing his remarks on 34 successive cases carefully observed in hospital. In one case only were both eyes attacked at the same time; in 13 both eyes were affected, but at an interval; in 3 cases there was iritis in one eye, retinitis in the other. In the large majority of cases (24) syphilitic affections of the skin or mucous membranes were also present.

He calls special attention to the frequency of complications witht his form of iritis; in 7 cases gummata of iris, in 4 descemetitis, in 4 circumscribed interstitial infiltrations of cornea, in 17 opacity of vitreous, in 6 retinitis. In 2 cases, gummata starting from the iris involved the ciliary body and came forward through the sclera beneath the conjunctiva. In 2 cases a chronic cyclitis, with diminished tension of the bulb, followed the iritis. Thirty-seven eyes were carefully examined after all inflammatory symptoms had disappeared, and only about one half had vision $= \frac{1}{2}$; 19 would read Jaeger 1 with $+$ 6. The treatment was mercurial, generally by inunction or subcutaneous injection, and the latter appeared often to have a beneficial effect. Atropine was of course used. A few cases of gummata were improved by repeated paracentesis of the cornea, after other treatment had failed. The average duration was five to six weeks, but often the date of commencement of the disease could not be accurately ascertained.

*Formation of Bone in Eye.*—The results of examination of two phthisical eyes in which there was a development of bone is detailed by Berthold (*Graefe's Archiv.*). A portion of the bone occupied the position of the lens, and resembled it so much in shape as at first to give rise to the supposition that it was really an ossified lens. Investigation showed, however, that the ossification proceeded from the iris. Berthold formulates the results of his examinations and the comparison of published cases as follows:—1. The most common starting point of ossification in the human eye is the choroid. 2. The iris may also ossify, and the product of its ossification easily gives rise to the supposition of an ossified lens. 3. The ciliary body shows least tendency to ossify. 4. Ossification of the human lens has not yet been shown.

*Sarcoma of Choroid.*—Dixon reports (*British Med. Journ.*, March 16, 1872) a

case which is of great interest as regards the decision of the question whether the early removal of malignant tumors may prevent their recurrence. In June, 1858, the eye of a young lady, which contained a tumor the size of a hazel-nut, was removed, and in February, 1872, the patient remained in good health. The account of the tumor is only briefly given, but is sufficient to establish its nature as sarcoma of the choroid without reasonable doubt.

*Tubercle of the Choroid.*—A very interesting and instructive case of tubercle of the choroid is narrated by Fraenkel (*Berl. Klin. Wochench.*, No. 1, 1872). The patient was a girl of 6, slightly built and of little endurance, but active and of good size. She had never had any special sickness, and there had been no death from hereditary disease in the family, though her mother was slightly scrofulous. At the beginning of May, she complained, at irregular intervals, of chilliness, was rather tired and sleepy, but otherwise quite as well as usual. I saw her first only on the occasion of a friendly call on her parents. She was a little paler than usual, but, except an anæmic murmur over first intercostal space, nothing could be detected. After these symptoms had lasted two weeks, with a tendency to improve, a partial ptosis of the left eyelid appeared. Suspicion of miliary tuberculosis was excited, and May 22d the fundus was examined. In the left eye, close to the disc, was a white discoloration, somewhat larger than the disc, and drawn to a point in one direction, over which the retinal vessels made an evident curve. During the following days the chilliness and tired feeling became less, but a paresis of the superior rectus was added to the ptosis. June 1st, the discoloration in the fundus was increased in size, and its edge had joined the edge of the disc and was indistinct. The vessels were enlarged, the fundus in other respects normal. The symptoms scarcely changed for a while. She was sent into the country, and after six or seven weeks returned looking and appearing perfectly well, the ptosis and paresis of rectus gone. Examination of fundus Aug. 14th revealed increased height of the spot near disc. August 27th, sudden gastric symptoms, which soon improved, but temperature and pulse rose, and respiration was nearly doubled. No other objective symptoms of local disease. She failed rapidly. September 10th, five dots with characters of tubercle seen in fundus. Slight abnormal symptoms on percussion and auscultation. Some of the cervical glands enlarged, and great swelling and tenderness of liver. Anorexia; emaciation; sopor; only at night attacks of cough. Death on October 1st, with symptoms of sudden œdema of lungs. There was no autopsy, but the carefully detailed symptoms, which, toward the close of life, were characteristic, make the nature of the disease not doubtful. The size and shape of the spot first seen in the choroid differs from the tubercles of that membrane previously reported; the changes it underwent, however, and the fact that a still larger one has been observed *post mortem* at the Berlin Pathological Institute, as also the later appearance of other tubercles in the same eye, appear to settle its character. The case also shows that general miliary tuberculosis may, after exciting some symptoms, become again for a while entirely latent.

### Retina and Optic Nerve.

*Arterial Pulse in the Retina.*—An article by Becker appeared in the last number of *Graefe's Archiv* on the visible phenomena of the circulation in the human retina. The chief results of his observation appeared in the report of the last Heidelberg Congress, and an abstract of them was published in this Journal May 16th. He found arterial pulsation almost invariably present, with insufficiency of the aortic valves, and also in two cases of aneurism of the aorta, but in no other form of heart disease. In three cases in which there was no heart disease and the eyes were normal, Becker was also able to discover a marked arterial pulse, but this was, in two of them, apparently due to a peculiar arrangement of the vessels.

*Anomalous Circulation in the Retina.*—Loring (*Archives of Ophthalmology and Otology*, ii., 2) describes three cases of anomalous circulation in the eye. In one case a large venous, in another an arterial branch disappeared suddenly beneath a patch of degenerated tissue in such a way that Loring considered they must form anastomoses with choroidal vessels. In the third case, in which there was a broad rim of choroidal atrophy surrounding the nerve, a vein of considerable size ran toward the nerve, but before reaching its edge made a sharp turn and could be traced directly into what was evidently a choroidal vessel. The illustrations accompanying the article give a better idea of the conditions than any description can do.

Two cases of *Anæsthesia of the Retina,*

interesting from their rarity, were narrated in this JOURNAL April 8th; one by R. H. Derby, one by the reporter.

*Strychnia in Amblyopia and Amaurosis.*—The subcutaneous injection of strychnia has been employed during the last two or three years in a large variety of affections of the eye attended with defective vision. As is usually the case with any method of treatment, it is chiefly those in whose hands it has appeared to be successful who have written on the subject. Still there is enough evidence in its favor to make it seem advisable to make farther trial of it. Werner (*Berl. Klin. Wochensch.*, 19, 1872) reports the case of a soldier who received a wound of the left lower lid and a small tear of the sclera at the edge of the cornea. Immediate loss of perception of light ensued and continued for five weeks. At this time the pupil was greatly mydriatic, the media normal, the retinal arteries smaller than in the other eye, but otherwise no change in the fundus. The scar in the sclera was not depressed, $\frac{1}{5}''$ in length. There was no irritability of this eye, but the vision of the other had sunk so that large type could not be read. After three injections of strychnia in the temple, in the course of four days, the patient could see small summer-houses on the edge of a hill a mile and a half distant. The mydriasis was still present in slight degree three weeks later.

Cohn's paper (*Wien. Med. Wochensch.*, 13, 1872; *Schmidt's Jahrb.*, 5) seems a very fair one. He reports on 50 cases of amblyopia treated with strychnia. These may be divided into two groups. In the first group (32 cases), the ophthalmoscope showed no change of the opticus. Of 16 cases of hypermetropia, with amblyopia, vision either for the near or the distance was improved in all. Of 7 cases of myopia, with amblyopia, in 5 moderate, in 2 no improvement was obtained; 3 cases of amblyopia, with normal refraction, were much improved, 1 not at all. In cases of amblyopia in drinkers or onanists (of each 2) and in a case of amblyopia following a gunshot wound beneath the skin in the region of the forehead, the strychnia had no effect. The second group includes 18 cases, in which there were evident changes in the nerve. In very few of these was there any improvement, and it would appear as if this were by no means certainly due to the strychnia. The dose was two mgrm., the number of injections at most twenty. No other remedies were used at the same time. In all cases in which the treatment was of benefit, the increase of vision could be observed after the first injection, often in a few minutes. Whether the improvement continued, could only be determined in very few of the patients.

Woinow (*Protocoles de la Soc. des Med. Russes, Ann. d'Oculist*, 5 and 6) from the cases he has treated, arrives at the conclusion that strychnia does not cure chronic diseases of the retina proper, and that it is also without action in cases of amblyopia accompanied by blindness for colors; in all cases in which its action had been favorable, the patients distinguished colors with great exactness, even though the decrease of vision was quite marked. He injected gr. $\frac{1}{45}$ every three or four days, and gave also extract of nux vomica gr. $\frac{1}{15}$. If any benefit was derived, it was evident within fifteen days.

Bull (*Med. Record*, Aug. 1) gives the carefully detailed report of 12 cases of inflammatory and atrophic changes of the optic nerve and retina, of which six were treated by mercurial inunction and potass. iod., the other six by strychnia subcutaneously. Bull draws the conclusion, from comparison of these cases, that strychnia seems to exert but little influence upon a recent inflammatory process, and here mercury gives the best results; but in atrophic cases strychnia is of advantage, provided only the disease has not lasted too long.

Chisholm (*Am. Jour. of Med. Sci.* Oct.) has used strychnia extensively the past year, and has found it best to gradually increase the dose until specific symptoms appear, then to continue the same dose. He begins with gr. $\frac{1}{40}$, often has increased to $\frac{1}{4}$ or $\frac{1}{5}$, in one case to gr. $\frac{1}{4}$ daily. It is preferable to give two injections daily; if only one can be given, pills may also be used, gr. $\frac{1}{40}$, increasing to gr. $\frac{1}{20}$. The place of injection is of no importance. He has seen prompt effect from the remedy in hemeralopia, muscular asthenopia from overwork, recent amblyopia and tobacco amaurosis. In progressive atrophy of the nerve, not dependent on intracranial trouble, it is more satisfactory than any other remedy, and in white atrophy there is sometimes benefit. In amblyopia, with choroidal atrophy (crescents or spotted fundus), permanent improvement of vision has been observed.

*Optic Neuritis with Cerebral Disease.*—Manz. Inflammation of the Optic Nerve in Diseases of the Brain, *Deutches Archiv f. Klin. Med.* ix. Abstract in *Centralbl.*, No. 27, 1872. Krohn. Two Cases of Neuritis Optici, *Monatsbl. f. Augenh.*, February and

March, 1872. Broadbent. On the Causation and Significance of the Choked Disc in Intracranial Diseases, *Brit. Med. Journal*, June 15, 1872. Rosenbach. A Case of Neuro-retinitis, with Tumor of Brain, *Graefe's Archiv*, xviii., 1. Hirschberg. Engorged Papilla in consequence of Solitary Tubercle in the Cerebellum, *Arch. of Ophthal. and Otol.*, ii., 2. Allbutt. On the Causation and Significance of the Choked Disc in intracranial Diseases, *Brit. Med. Jour.*, April 27, 1872. Optic neuritis, in its connections with intracranial diseases, has excited much interest and been the subject of many observations in the last few years, and the discoveries of Schwalbe, which have been previously referred to, gave a fresh impetus to investigation of the matter, as offering a possible farther means of explanation of the causal relation between the two affections, in some cases, at least. Extension of inflammation or passage of fluid from the intracranial cavity into the lymph-space around the nerve, and consequent compression or serous infiltration of the nerve just behind its entrance into the eye, were theories which immediately arose.

Manz laid the optic nerve bare from above and ligated it at the optic foramen before removing it, in order to prevent the escape of fluid from between the sheaths. He found in diseases of the brain where the intracranial pressure was increased or there was fluid in the arachnoid space, a dropsy of the sheath of the optic nerve was frequently but not always present. The outer sheath was more or less pushed away from the nerve by fluid and bulged out, especially at its junction with the sclerotic. In many cases where the amount of fluid found was small the distention of the sheath showed that it had previously been greater. No hyperæmia of the sheath was observed, and this is evidence against the inflammatory exudation of the fluid at the spot, though it is admitted that in some cases an extension of the inflammatory process from the meninges to the sheath may take place and give rise to local exudation. The dropsy was always found, also, on both sides, though not always alike. In the cases in which choked disc was found, there were always evidences of increased intracranial pressure, as shown by flattened convolutions or distended ventricles, and the amount of intracranial fluid was in relation to the dropsy of the sheath. He believes he has seen the swollen disc recede as the symptoms of pressure have diminished, and become prominent as these symptoms (sopor, &c.) recurred or appeared for the first time. The character of the disease seemed to have no *direct* connection with the production of distention of the sheath. In a case of meningeal hæmorrhage, the sheath of the nerve and the subvaginal space on both sides contained partly-clotted partly-fluid blood, which, in view of the otherwise slight changes in the nerves, could not well have originated on the spot, but must have come from the cranial cavity. That inflammatory hyperplastic conditions may develope out of a dropsy of the sheath is proved by a case of tubercular meningitis in which the lining-cells of the intervaginal meshwork and the inner sheath were greatly increased, and the fibres forming the meshwork covered here and there by a thick, finely-granular protoplasma deposit.

Krohn's first case was that of a boy of 8 years, with choked discs, tumor of brain, and fluid within the ventricles and at the base. An attempt was made to demonstrate the supposed communication of fluid in the sheaths of the nerves with fluid within the skull, by freezing all the parts before examination. The attempt failed, since freezing had not occurred when the parts were opened. The method suggested may, however, prove of some value. The second case, a woman, had carcinomatous degeneration of the ovaries, and choked discs. Here the ocular affection was found due to the existence of tumors, of the same nature as the tumors of the ovaries, and surrounding the nerves behind the eyes. The mass of each tumor was in the subvaginal space close to the globe, but the growth could be traced into the nerve and back between the sheaths as far as the optic foramen. The brain and other organs were normal. This case is extremely interesting, not merely as regards the production of the optic neuritis, but also as regards the question of methods of transmission in the metastasis of malignant growths.

Broadbent relates two cases of double neuritis optici, with tubercular meningitis, in which there was much fluid in the arachnoid cavity, but no choked disc. In one case there was a bulbous expansion of the outer nerve sheath behind the eye on both sides; in the other only on the side on which the neuritis was less. In his experience, some hyperæmia of the disc is common in tubercular meningitis, while well-marked choked disc is rare, though he supposes that bulbous expansion of the nerve sheath is more common in this disease than has been generally believed. He then en-

deavors to show why fluid in the space between the sheaths should *hinder* the production of choked disc, but his reasoning seems to imply an erroneous idea of the distribution of vessels to the disc and nerve.

Rosenbach describes a case of double optic neuritis, with tumor of the base of the brain pressing upon the optic nerves and chiasma, and with a collection of serum in the ventricles. It is of value from the minute detail of the changes found in the nerve and eye, but throws no special light on the connection between the tumor and the neuritis. The changes were confined to the disc and the retina immediately about it. The rest of the retina was normal, and the nerve in the neighborhood of the eye was but slightly affected. The disc projected sharply into the eye; the increased thickness was caused chiefly by ganglionic enlargement of the nerve fibres; there was also œdema and increase of the connective tissue and small vessels. White patches, seen during life, were due to the alteration of the nerve fibres mentioned; no fatty degeneration was found. The lamina cribrosa was thickened and swollen. Transverse sections of the nerve near its entrance to the eye showed no distention of the subvaginal space.

Hirschberg narrates a case of solitary tubercle of the brain, the size of an apple, with great hydrocephalus, and choked discs.

In the excellent article by Allbutt, the connection between brain disease and neuritis optici is well discussed.

*Temporary Blindness after Scarlatina.*—Förster (*Jahrb. f. Kinderheilk.*, Hft. 3, 1872) narrates a case of sudden temporary blindness, with albuminuria, following scarlet fever, in a child of 2 years. The child seemed convalescing well, when sudden severe symptoms of Bright's disease came on. The blindness appeared thirty-two days after the eruption, eighteen days after the symptoms of Bright's disease, and while the latter were diminishing; it lasted a few days after the albuminuria had disappeared, sixteen days in all. There was no œdema and no uræmic convulsions. In four cases which Förster found reported, the blindness appeared from fifteen to twenty-six days after the eruption, with albuminuria and convulsions, and lasted from twenty hours to seven days; in all, albumen continued present after blindness had passed off. One case was examined with the ophthalmoscope, with negative result.

It would seem as if these cases were not so very exceptional. A case related by Power, in the *Practitioner* for May, 1871, called out reports of two other cases in the same journal for May, 1872. In the one case, observed by Lente, the blindness appeared twenty-six days after the commencement of the disease, while severe head-symptoms, albuminuria, &c., were present, and vision began to improve after six days. In the other case, albuminuria and dropsy had followed scarlet fever, but both had been absent three or four days, when sudden blindness occurred, with pain in the temples and behind the ears; here sight returned in three days.

*Formation of bone in the Retina.*—In the Curator's Pathological Report by Nettleship, in the last number of the *Ophthalmic Hospital Reports*, the detailed account is given of the examination of some twenty eyes removed for various injuries or diseases. Perhaps the most interesting of these is an eye lost by inflammation in childhood, nineteen years before, on account of the hitherto undescribed pathological change it presented, the formation of bone in the retina. The cornea was opaque and the degenerated iris adherent to it; the lens absent; the vitreous was fluid and without fibrous webs; the choroid generally atrophied. The retina was everywhere *in situ*. It was much pigmented except near the disc, and the pigment clearly followed the course of the retinal vessels. In the pigmented parts it was much wasted, but in the parts free from pigment the various layers could be made out, except the bacillar, which could nowhere be traced. The pigment epithelium was generally absent near the pigmented parts of the retina. "At one part of the pigmented portion of the retina was a long, narrow patch of bone. It was thin, irregular in outline, and projected on the inner surface of the retina. It was about one-fifth of an inch long, and about half that width. From its borders, spurs or processes of bone passed out into the retina around. A large retinal vessel, containing blood, passed through its middle, and was imbedded in it. Well-formed lacunæ and canaliculi were present in abundance. The bone was irregularly mixed up with patches and lines of pigmented unossified retina, especially at and near its margins."

### Lens.

*Dislocation of the Lens.*—Two interesting cases of spontaneous dislocation of the lens are reported by Schroeter (*Monatsbl. f. Augenh.*, February and March). The patients were a brother and sister, aged,

respectively, 39 and 37. In each a very high degree of myopia was rapidly developed; in the man in the course of a single day, in the woman chiefly within three months. Atropine, and in one case, also, calabar bean caused no change in the refraction. Examination showed that the lens was much more convex than natural, that it was displaced forward, pushing the iris before it, and shook on movement of the eye. The zonula was evidently relaxed, but no rupture of its fibres could be made out. Schroeter infers in these cases an atrophy of the ring-fibres of the ciliary muscle and secondary flattening of the ciliary processes with consequent separation of them from the zonula, which would explain the increased convexity and more anterior position of the lens.

*New Operations for Cataract.*—Liebreich (*St. Thomas's Hospital Reports*); De Wecker (*Annales d'Oculistique*, 3 and 4); Taylor, Bribosia, Warlomont, Streatfield (*Monatsbl. f. Augenh.*, Sept.).—Liebreich makes the section as follows:—"Puncture and counter-puncture are to be made in the sclerotic about one mm. beyond the cornea; the whole remaining incision is to pass with a very slight curve through the cornea, so that the centre of it is about two mm. distant from its margin. This incision may be made upward or downward." Liebreich claims for this operation simplicity and ease of performance, avoidance of the necessity of an iridectomy, and excellent results.

De Wecker has modified Graefe's operation. Puncture and counter-puncture lie one mm. outside of the sclero-corneal border and two mm. below a horizontal line drawn through the superior edge of the cornea; the summit of the section is at the upper border of the cornea. This gives a somewhat longer wound than Graefe's method, which de W. thinks an advantage. He also uses a pair of curved iridectomy forceps, which at the extremity of the convex surface of each arm carries a small triangular cutting point, to divide, and at the same time remove a portion of the capsule.

Taylor makes an incision about 2‴ long at the upper sclero-corneal junction, cuts out a bit of iris as near as possible to the periphery, widens the corneal wound sufficiently, enlarges the opening in the iris by cutting it away from its attachment with scissors, and extracts the lens through the opening in the iris.

Bribosia first opens the lens capsule with a needle, then makes Graefe's section, allowing the aqueous to flow out as soon as puncture and counter-puncture are made, so that the iris falls in front of the knife and is cut away in finishing the cut.

Warlomont describes the method of Le Brun. The puncture and counter-puncture are in the horizontal diameter of the cornea, close to the scleral edge; the highest point of the flap is opposite the upper edge of the pupil.

Streatfield employs a triangular knife with only one cutting edge, makes no counter-puncture, but thrusts the knife through the cornea till it can be seen in the anterior chamber, and then pushes it along sidewise to complete the incision.

### Refraction and Accommodation.

*The Eyes of the Pupils of the Royal Friedrich's Gymnasium and their Changes in the course of* $1\frac{1}{2}$ *Years.* Cohn (*Jahresber. d. k. F. G. Zu Breslau*, 1872).—Cohn's investigations form an important contribution to the subject of progressive and acquired myopia. The following is taken from an abstract of his paper in *Schmidt's Jahrb.*

At the first examination, of 361 pupils, 125 (35 per cent.) were shortsighted, 25 (7 per cent.) oversighted, and 24 (7 per cent.) suffered from other affections of the eyes; only a little more than half, 187, (52 per cent.) were normal-sighted. From the lower to the higher classes a continuous increase of myopia was shown, since of the pupils from 6 to 10 years of age, 12 per cent., from 11 to 15 years, 37 per cent., from 16 to 22 years, 60 per cent., were myopic. The degrees of myopia were in nearly $\frac{1}{4}$ of the cases slight, $\frac{1}{60}$ to $\frac{1}{36}$, and this had generally escaped the notice of the individuals themselves; nearly $\frac{1}{2}$ were myopic $\frac{1}{36}$ to $\frac{1}{16}$; another $\frac{1}{4}$ from $\frac{1}{15}$ to $\frac{1}{8}$, and 6 pupils from $\frac{1}{8}$ to $\frac{1}{4}$. The higher the class the more were the cases of great myopia. Thus in the 7th class there was no myopia greater than $\frac{1}{24}$, in the 6th (with a single exception), none greater than $\frac{1}{12}$, in the 5th and 4th none greater than $\frac{1}{8}$. Acuteness of vision among 125 myopes was in 110 normal; with suitable glasses they could read at the same distance as the normal-sighted. Only 15 myopes had an amount of vision below the normal standard; in 12 of these, $V = \frac{2}{3}$, in 2, $V = \frac{1}{2}$, and only one pupil, with great congenital myopia, had less vision than this. A posterior staphyloma could not be discovered in myopes under 10 years, but the proportional frequency of its occurrence increased afterwards with the age. It is interesting to note the statement, though not a new one, that the posterior staphyloma

had no definite relation to the amount of the myopia; both broad and narrow crescents appeared as well in the high as in the low degrees. As to hereditary tendency 41 of the myopes stated that one or both parents were shortsighted. This number, resting simply on the observation of the children themselves, is, perhaps, likely to have been rather below the truth; and for the same reason another remark, viz., that of the 41 in whom hereditary predisposition seemed to have an influence, 36 had had measles, while of the whole 125 myopes only 86 stated they had measles, is of little value; moreover, it does not appear how great a proportion of the normal-sighted had also had measles or other of the diseases of childhood. At the examination made a year and a half later, it appeared that (after striking out all those who had in the meantime left the school and could not be again examined) of 74 emmetropes, 70 were still normal-sighted, while 14 had become shortsighted in degrees varying from $\frac{1}{6}$ to $\frac{1}{20}$. Of 54 previously shortsighted, 25 remained myopic of the same degree, in 28 the myopia had increased. The average myopia of these 28 had progressed from $\frac{1}{20}$ to $\frac{1}{14}$, and the tendency to progression was specially evident in the medium and higher degrees of myopia. The vision had, in most, remained the same; in 4 only had it diminished, while in one case it had even improved. The staphylomata formerly observed had not importantly changed; among those pupils before emmetropic, but now myopic, no staphyloma was noticed; on the other hand, in some previously myopic, but without staphyloma, a staphyloma could now be seen.

From a brief abstract in the *Annales d'Oculist.*, 5 and 6, 1872, of the investigations of Maklakoff (*Soc. Phys. Med. de Moscou*, 1871) on the eyes of 759 school-children, we learn that he confirmed the previous observations of Cohn and others that the number of myopes as well as the degree of myopia was greater in the more advanced classes. It is stated, also, that he repeated his examinations at the interval of a year, but no comparison of the results obtained is given.

*Traumatic Spasm of Accommodation.*—Just reports, in the *Monatsbl. f. Augenh.*, a case of spasm of the ciliary muscle in a soldier, excited by a scratch of the upper eyelid by a bullet. The man could see in the distance only with a strong concave glass, but the use of atropine reduced the apparent myopia to $\frac{1}{48}$. Just believes this to be a unique case; the usual and not uncommon result of a blow on the globe being paralysis of the accommodation.

### Muscles.

*Oculo-Motor Paralysis in Acute Rheumatism.*—Michel (*Monatsbl. f. Augenh.*, May) reports the following interesting case. A soldier entered the hospital with symptoms pointing to a meningitis; these symptoms increased, and four days afterward a paralysis of one oculo-motorius, with hyperæmia of the corresponding opticus, appeared to strengthen the diagnosis. The following day, however, the general symptoms began to diminish, and three days later acute articular rheumatism set in and ran a regular course, while the paralysis of the oculo-motorius rapidly disappeared.

A valuable paper on the modern operation for strabismus was read by Loring before the New York Academy of Medicine, March 7th last. The paper and the discussion which followed it were published in the *Medical Record*, April 15th.

### Sympathetic Ophthalmia.

Cohn has published, in quarto form and with illustrations, a detailed account of 33 cases of gun-shot wounds, involving the eye, which came under his observation during and immediately following the last Franco-Prussian war. These are of much value considering the comparatively few carefully observed cases of gun-shot injuries of the eye which have been reported. One case is of particular importance in connection with the at present generally received notions concerning the production of sympathetic ophthalmia.

A fragment of bomb-shell wounded a soldier on the right upper eyelid and brow, and caused partial blindness of the right eye. Five months later, the only change to be observed was a dark, prominent spot in the region of the macula, with a yellowish-white streak running from either side of it. The function of the left eye was perfectly normal. A month later, the vision of the left eye had much diminished and there were subjective flashes of light in it. The only change was a paleness of the papilla and thinness of the vessels. The right eye was enucleated, and vision soon became again normal in the left. Microscopic examination of the injured eye showed only a projecting fold of the retina in the region of the macula and remains of former hæmorrhage in front and behind it. The iris and ciliary body as well as all other parts of the eye were normal.

ATH FOLLOWING ENUCLEATION.

Just (*Monatsbl. f. Augenh.*, July and Aug.) narrates a case of death, with symptoms of meningitis, following enucleation of an eye. The patient was 63 years old. There was sympathetic irido-cyclitis of the right eye; the sight of the left eye had been lost from an injury three months before, and there appeared to have been panophthalmitis, with perforation of the cornea; it was still very painful to touch, and the conjunctiva was darkly congested and swollen. The injured eye was enucleated, in the hope of benefitting the other. All went well for ten days, except that rather more suppuration occurred than usual, and the right eye meanwhile improved. Then headache, delirium, sopor, and death forty-eight hours after the first symptoms appeared.*

Medical and Surgical Journal.

BOSTON: THURSDAY, NOVEMBER 14, 1872.

## THE HORSE EPIDEMIC.

THE recent epidemic of influenza among the horses, exerting, as it did, so marked an impression on all classes of the community, becomes a matter of general interest to the medical profession; as a subject of scientific interest, it suggests topics of thought to accurate observers in our own ranks, and, from the large experience which may be collected throughout the country, should lead to deductions of value.

The rapidity of access which the disease manifested, its probable origin and nature, the question whether it is a self-limited disease, or whether it will yield in any degree to treatment, the course of the disease and its symptoms as affected by various causes, the influence exerted by elevation, by the state of the air, by temperature and moisture, its analogy to similar diseases in the human species, the consideration of the question whether or no the epidemic may be the forerunner of similar epidemics in other domestic animals or in man, or whether it may be the harbinger of cholera as suggested by medical writers—all these, and a score of other questions are of importance at the present day, and will naturally suggest themselves to medical men and other members of the community.

The physician who naturally felt a ready sympathy with the four-footed comrade of his daily routine, who found himself obliged to tramp many a weary mile in place of riding, to visit his sick patients only, or to see them *in sections*, will gladly note his observations in assistance of our excellent Secretary of the State Board of Health in his endeavor to investigate the epidemic. In his recent letter in the public press he calls attention to the disease, and asks that the condition of the air and other possible exciting causes may be noted, together with other facts which may be thought to have a bearing on the subject. We are confident that medical men will gladly lend their aid to an investigation which promises to be of so much value to the community, both lay and medical.

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LETTER FROM THE SURGEON GENERAL OF MASSACHUSETTS.—The letter of Dr. Dale, which we publish below, will commend itself to the attention of every right-minded member of the profession.

BOSTON, Nov. 4th, 1872.

MESSRS. EDITORS,—The daily papers make mention of the appointment of Dr. Ira B. Cushing, of Taunton, as Assistant Surgeon, 3d Reg't, Mass. Vol's.

As a subordinate of the Commander-in-Chief it would be a breach of military etiquette for me to make any comments upon this appointment.

Precedent has always given the Surgeon of a Command the right to nominate his assistant.

His Excellency, the Commander-in-Chief, in consideration of this precedent, directed that a commission should be issued to the above gentleman.

So far as any responsibility is placed upon me I shall hereafter, as I have heretofore, steadily set my face against heretical medical opinions.

I have the honor to remain very respectfully yours, WM. J. DALE,
*Surgeon General.*

* Writers of papers on Ophthalmology will contribute much assistance in the preparation of the semi-annual reports in this department if they will forward copies of their papers, addressed to this JOURNAL.—EDS.

# From British Journals.

On the Detection of Bullets.—M. Legouest (*Med. Times and Gazette*, Sept. 21st, 1872), on the occasion of a report for ascertaining the nature of metallic bodies retained in gun-shot wounds, made some interesting observations before the Académie de Médecine on the general subjects of detecting and removing such foreign bodies. He urged the necessity of attending to the old rule of placing the patient, as nearly as possible, in the position which he occupied when he received the injury.

Having referred to the various instruments, such as Nélaton's and other probes, he showed to the Academy his own simple mode for detecting the foreign body, when composed of lead. For this he uses the stem of the common clay pipe, which every soldier has about him. Having passed the pipe-stem down to the bullet, he turns it round and rubs it on the foreign body, which colors the clay black, and even causes it to bring out particles of the metal. He is then able to make traces with it on paper, as with a pencil, and, having damped these first with vinegar, and then with a solution of iodide of potassium, he produces the fine yellow color characterizing the iodide of lead.

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Movable Kidneys (*Med. Times and Gazette*, Sept. 21st, 1872).—Dr. Jago, in 1858, reported in the same journal "two cases of supposed movable kidney." To ascertain how far his diagnosis that these movable abdominal bodies were harmless might be justified by the future, he has recently made inquiries about the patients. The first rejoined her husband in Australia several years after the above date, and it is not improbable that she is still living. The other, though still carrying the "tumor," was a few months since in wonderful health and spirits, and almost oblivious of the movable body whose presence she had herself detected twenty-three years ago, and which, at that time, caused her much mental distress.

Dr. Jago, in his recent report, relates two more cases of this anomaly. "To sum up," says he, "the four examples of movable kidney I have met with: All the patients were women, and the organ always the right. The first case was complicated by excoriated os uteri and irritability of the bladder, which was exaggerated by pushing the kidney downwards; the third with menorrhagia and leucorrhœa. There were signs, symptoms, or history which raised the question of malignant disease in the first, second and fourth cases. The second and fourth cases were victims of hysteria."

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The Combination of the Subcutaneous Injection of Morphia with the Administration of Chloroform (*Med. Times and Gazette*, Sept. 21, 1872).—At a recent meeting of the Académie des Sciences, M. Demarquay read a paper on the above practice. This procedure has several times been resorted to in consequence of M. Claude Bernard's experiments having shown that in this way the anæsthetic condition can be kept up by the employment of a much less quantity of chloroform. According to M. Demarquay's own clinical observation, as well as the results of his experiments on animals, this practice, so far from diminishing, may add to the dangers of chloroform, especially when the patient is already in a depressed condition from hæmorrhage, shock, &c. He states that either of these agents used separately produces a depression of temperature; and by using the two together, he has obtained a reduction of $2\frac{1}{2}^{\circ}$ C. He is of opinion that the combination should be entirely renounced.

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The Medical Department of Prussia has recently ordered that every dispenser shall write his name on the prescription, no matter how often the prescription is repeated. The *Chemist and Druggist* says this sounds very well, but many (of course they are very stupid not to agree with the Medical Department) do not feel much interest in such a collection of autographs, and strongly object to it. Now, what is the unhappy pharmacist to do in this calamity? On one side the stubborn customer, who positively refuses to see his prescription converted into a public ground for all sorts of handwritings, on the other side the plain and strict order of the governing authority, that threatens each offender with a heavy fine. —*Med. Press and Circular.*

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Mr. Walter Thompson, London, has sent to the committee for securing a complete medical education for women in Edinburgh a cheque for £500, being the first moiety of £1,000 promised by him.

# From American Journals.

EMPHYSEMA OF THE LIVER OCCURRING IN A CASE OF TYPHOID FEVER.—Dr. J. Forsyth Meigs (*Philadelphia Med. Times*, Oct. 5th, 1872) gives a clinical lecture on the above obscure and rare complication. Besides such lesions as are often found in a case of typhoid fever, the autopsy revealed a liver much enlarged (one-third), of a dirty brownish yellow color. Tissue everywhere crepitant, light and spongy. Cohesion greatly lessened, so that the finger could be readily thrust in, making a ragged hole. Pieces cut off and thrown into water floated exactly like lung, and as lightly. Tissue singularly cribriform, exhibiting innumerable small cavities, like the cells of the lungs. No large cavities in this organ. On pressure, much dirty, frothy, thin liquid escaped, which looked like ichor, but not like pus. Microscopic examination showed the liver to be very fatty, cells broken up and disintegrated; scarcely any of full size and natural character. Fat in large drops scattered over the field, and the broken, small coagulated and irregular cells, all containing much fat in minute refracting points.

In this case there was no emphysema of the neck, and it was difficult to suppose that the singular cribriform and spongy character of the liver, which depended on the formation in the tissue of the gland of innumerable small open spaces, filled with gas or air, so that the liver looked like lung tissue, or like a very delicate honeycomb, could have all been produced in the eleven hours and a half which intervened between death and the autopsy. There was no decomposition of the tissues in other parts of the body, and there was no putrefactive process going on in the kidneys, which were also emphysematous, though to a much less extent than the liver.

Dr. Meigs thinks that Frerichs probably gives the best account of the nature of this singular lesion and quotes him as follows: The cause of this peculiar development of gas in the liver, is obscure, and the nature of the gas is unknown. We are not, in my opinion, warranted in assuming, with Piorry, that the intestinal gas reaches the liver through the eroded roots of the portal vein. It is more probable that the affection ought to be regarded as a local process of disintegration, and that it originates, under certain circumstances, in those complicated metamorphoses of matter which occur in the liver from the presence of large quantities of the carbo-hydrogens. Whether emphysema of the liver may, as Louis and Piorry believe they have proved, exist during life, and be diagnosticated from the disappearance of the hepatic dulness, can only be satisfactorily determined by further observations.

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THE PREVENTION OF EXCESSIVE INFANT MORTALITY.—Dr. Henry Hartshorne writes to the Philadelphia *Medical Times* of Sept. 16th, 1872, on this subject. It is well known by physicians that the summer is in our large cities fatal to infants beyond any other season. A single week this summer produced a death-list of 1569 in New York, and the next, of 852 in Philadelphia—in each instance more than double the weekly mortality of the year; the excess being almost altogether due to diarrhœal "diseases" and other affections of young children. Epidemic cholera in 1866 caused 900 deaths in Philadelphia. This number of victims was exceeded in a single month this year by the deaths in our city from cholera infantum and diarrhœa, in children under five years of age.

A practical question is how to prevent this excessive mortality. Dr. H. has a suggestion growing out of the results of the frequent rural and aquatic excursions for the children of the poor, which have been made during the past summer. Of 350 infants in arms upon one of these occasions, a physician remarked that "*two-thirds were ill.*" The benefit to many of these was immediate and marked.

This is, however, but a beginning of what is needed. "If it were practicable to *transport to the country*, at the beginning of hot weather, large numbers of infants, with their mothers (the same class as the excursionists), it is certain that the amount of illness and death would be greatly diminished. Why cannot this be done?"

The writer suggests that the elevated portions of the public parks, or of places more remote, could be used as localities; that large *tents*, as army *hospital tents*, would do for habitations. The services of a small number of matrons, stewards, physicians and nurses would be required; of the last named but few would be needed, as the mothers would be able to furnish nearly if not quite all such service. A proper selection of the recipients of this charity, limiting the age of the children to not over three years, would be necessary. Dr. H. doubts whether the expense of several such camps well administered would greatly exceed that of the children's free excursions; while the permanent benefit afforded must be many times greater.

# Medical Miscellany.

UNDER FIRE.—Our distant friends will be glad to learn that the office of the JOURNAL escaped the devouring element in the dreadful catastrophe which has come upon our city. The flames which destroyed the offices of our neighbors, the *Evening Transcript*, the *Saturday Gazette* and the *Boston Pilot*, were arrested within a comparatively short distance of us, and we are able to continue our publication without interruption. Unlike the fire in Chicago, which destroyed the houses and the personal property of medical men in common with others, the conflagration here was confined to the business portions of our city, and one only of our medical brethren has been driven from his home.

The kindly expressions of interest which have reached us from near and distant parts of the country show that the misfortune has awakened the sympathy of many warm hearts. For this the medical men, in common with other classes of our community, cannot fail to be deeply grateful. EDS.

AT Constantinople, the Government have determined that instruction in the Imperial School of Medicine shall be given in Turkish, and have removed all the professors who cannot speak the national language.

WHOOPING COUGH and pneumonia are prevalent in Littleton, New Hampshire.

BENNINGTON, Vermont, has a severe visitation of typhoid fever and measles.

MEASLES and whooping cough are prevailing extensively in Vershire, Vt., and the adjoining towns. The two diseases accompany or follow each other, and in some cases almost entire families have been prostrated at once. There have also been a few cases of typhoid fever.

A BALTIMORE doctor rides in a buggy drawn by two lively negroes, since his horse has been an invalid.

DR. PROSPER K. HUTCHINSON, for many years a distinguished physician at Coventry, Rhode Island, died on Friday, aged 55 years. He was surgeon in the twelfth regiment.

THE Medical Society of London held its centenary session on the 21st ultimo.

THE Medical Society of London, offers the prize of the Fothergillian gold medal for 1873, of the value of twenty guineas, for the best essay on cancer. The subject for 1874 is the therapeutic means for the relief of pain. The prize is open for universal competition. Essays, *not in the handwriting of the author*, must be forwarded to the Society's rooms on or before the first of November next preceding the 8th of March in the years 1873 and 1874 respectively.

PROF. LAW ON THE HORSE DISEASE.—At a lecture on natural science at Cooper Institute, New York, by Prof. Law, of the Cornell University, the lecturer showed that the present epidemic was no new disease—records existing of its appearance in Greece nearly five hundred years before the Christian era—and was simply the influenza. He then described the symptoms and many of the subsequent consequences, showing that all cases could not be treated alike. He traced the course of the present epidemic, and clearly demonstrated that it did not travel in any special direction, and that in this, as in all other previous visitations, neither season, temperatere, volcanic, electrical or atmospheric effects had anything to do with it.

HEAVIEST RECORDED BRAIN.—Dr. James Morris gives the report of an autopsy made at the University College Hospital, London, of a bricklayer, aged 38, in whom the brain was found to exceed sixty-seven ounces in weight.

PAMPHLETS RECEIVED.—Normal Ovariotory. By Robert Battey, M.D. Rome, Geo. Atlanta: 1872, pp. 18.—Proceedings of the Pathological Society of Philadelphia. Vol. III. Philadelphia. 1870. Pp. 200.—Half Hour Recreations in Popular Science. No. 5. Nebulæ Comets, Meteoric Showers, and the revelation of the Spectroscope regarding them. By Prof. H. Schellen and others. Boston: Estes & Lauriat. Pp. 190.—On a New Method of Extraction of Cataract. By R. Liebrich. Philadelphia. 1873.

*Deaths in fourteen Cities and Towns of Massachusetts, for the week ending Nov.* 2, 1872.

| *Cities and Towns.* | *No. of Deaths.* |
|---|---|
| Boston | 133 |
| Charlestown | 13 |
| Worcester | 13 |
| Lowell | 12 |
| Chelsea | 4 |
| Cambridge | 21 |
| Salem | 10 |
| Lawrence | 8 |
| Springfield | 10 |
| Lynn | 5 |
| Gloucester | 4 |
| Fitchburg | 6 |
| Newburyport | 7 |
| Haverhill | 6 |
| | 252 |

| *Prevalent Diseases.* | |
|---|---|
| Consumption | 38 |
| Pneumonia | 23 |
| Typhoid Fever | 16 |
| Scarlet Fever | 10 |

Twenty deaths from smallpox are reported; sixteen in Boston, two in Charlestown, and two in Cambridge.

GEORGE DERBY, M.D.,
*Secretary of State Board of Health*

DEATHS IN BOSTON for the week ending Saturday, November 9th, 162. Males, 90; females, 72. Accident, 3, apoplexy, 6—ashma, 1—bowels, dis. of, 1—bronchitis, 7—inflammation of the brain, 3—congestion of the brain, 1—disease of the brain, 7—burned, 2—cancer, 3—cholera infantum, 4—cerebro-spinal meningitis, 2—consumption, 23—convulsions, 6—croup, 1—dropsy, 1—dropsy of brain, 1—dysentery, 2—erysipelas, 1—typhoid fever, 8—disease of the heart, 5—hæmorrhage, 1—homicide, 1—disease of the kidneys, 4—jaundice, 1—disease of the liver, 4—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 8—measles, 3—old age, 3—pleurisy, 2—pyaemia, 1—purpura hæmorrhagica, 1—suicide, 1—smallpox, 31—scalded 1—teething, 1—whooping cough, 1—unknown, 3.

Under 5 years of age, 53—between 5 and 20 years, 17—between 20 and 40 years, 46—between 40 and 60 years, 29—above 60 years, 17. Born in the United States, 103—Ireland, 38——other places, 21.